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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,368	01/12/2006	Atsushi Yamagishi	284112US0PCT	7782
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER	
			SUTTON, DARRYL C	
		ART UNIT	PAPER NUMBER	
		1612		
		NOTIFICATION DATE	DELIVERY MODE	
		02/15/2008	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

## Office Action Summary

Application No.

10/564,368

Applicant(s)

YAMAGISHI ET AL.

Examiner

Darryl C. Sutton

Art Unit

1612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-11 is/are rejected.
- 7) ☒ Claim(s) 1-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/09/2006.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

Claims 1-11 are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claims 4-7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4-7 have not been further treated on the merits.

Claims 1-11 are objected to because of the following informalities: the term "given below" is not required for proper interpretation of the claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1) Claims 1-2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Winston (WO 1998/13012).

The claims are drawn to an oral cavity composition and a method of treating teeth with said composition.

Winston teaches an improved 2 part product for remineralizing or mineralizing teeth with a separating means for separating the components (Abstract), and a two part packaged product (page 42, lines 4-20). Winston also teaches an embodiment of the product which contains sodium fluoride and monoammonium phosphate in one component with an aqueous pH of 5.38 and calcium malonate in the other component with an aqueous pH of 6.83 (page 61, Example G, page 27, lines 23-28, page 59, lines 14-20, page 64, lines 10-14). Winston teaches that when using the two part products the two components are simultaneously dispensed from their separate tubes, mixed with water or saliva to form aqueous solutions and mixing of the products proceeds only when both are introduced into the oral cavity (page 24, lines 1-5, page 32, lines page 36, lines 16-18, page 42, lines 25-27). Winston also teaches that water soluble inorganic phosphate salts for use in the invention include alkali and ammonium salts of orthophosphoric acid (page 28, lines 15-22). Winston teaches that phosphate salt is present in the invention such that the mixed composition will further contain dissolved phosphate ions (page 25, lines 13-21). The reference anticipates the claims insofar as it discloses an oral composition comprising composition (A) containing a fluoride ion-supplying compound and an inorganic phosphoric acid salt; and composition (B) containing a calcium salt of malonic acid.

2) Claims 8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Wiesel (U.S. Patent 6,287,120).

The claims are drawn to product for dental treatment and methods of using said product.

Wiesel teaches an embodiment of a carrier coated with a paste, gel or solution which contains medicaments which promote the repair or remineralization of tooth enamel, for example Enamelon (Abstract, column 8, lines 28-36). It is understood that the invention of Winston discussed above is Enamelon. Wiesel teaches that the carrier is a non-woven, porous material which is first dipped in one solution and that additional solution may be applied to the porous material while it remains on the patient's teeth (column 3, lines 65-67, column 4, lines 1-5). The reference anticipates the instant claims insofar as they teach a product for dental treatment comprising a composition (A) containing a fluoride ion-supplying compound and an inorganic phosphoric acid salt; and composition (B) containing a calcium salt of malonic acid wherein (A) and/or (B) is supported on a carrier selected from a group consisting of paper, cloth, nonwoven fabric, absorbent cotton, sponge and porous film, and wherein the compositions (A) and (B) are discrete from each other so that the two compositions can be alternately used and then come to be mixed with each other at each tooth region when applied thereto.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 1) Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winston (WO 1998/13012).

Winston is discussed above.

Winston does not disclose an embodiment that is also comprised of orthophosphoric acid.

Regarding claim 3, the prior art does not teach an embodiment comprised of the specific compound disclosed. However, generally, it is *prima facie* obviousness to select a known material based on its suitability for its intended use. See *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Also, established precedent holds that it is generally obvious to add known ingredients to known compositions with the expectation of obtaining their known function. See, e.g., *In re Linder*, 457 F.2d 506, 507 (CCPA 1972); see also *In re Dial*, 326 F.2d 430, 432 (CCPA 1964). Accordingly, it would have been obvious to modify the oral cavity composition of Winston to contain orthophosphoric acid, i.e. phosphoric acid, since phosphoric acid dissociates when mixed with water to yield phosphate ions, motivated

by the desired to have a product containing dissolved phosphate ions when mixed with water as disclosed by Winston.

2) Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiesel (U.S. Patent 6,287,120) as applied to claims 8 and 10 above, and further in view of Winston (WO 1998/13012).

The claim is drawn to a method of treating teeth.

Wiesel is discussed above.

Wiesel does not disclose a method of impregnating a component of the composition with water immediately prior to application of the device to the teeth.

Winston is discussed above.

Winston does not teach the use of a carrier with the composition.

Regarding claim 11, the prior art does not teach a method step comprised of using water as disclosed. It would have been obvious to modify the method of Wiesel by adding water to the carrier before placing the device on the teeth motivated by the desire to mix each composition with water to produce the phosphate and calcium ions before applying the device to teeth and mixing the compositions together as disclosed by Winston.

Claims 1-3 and 8-11 have been rejected.

Claims 1-11 have been objected to.

No claims are allowed.

**Conclusion**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darryl C. Sutton whose telephone number is (571)270-3286. The examiner can normally be reached on M-Th from 7:30AM-5:00PM EST and on Fr from 7:30AM-4:00PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Krass can be reached at (571)272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Darryl Sutton  
Patent Examiner  
Art Unit 1612

Frederick Krass  
Primary Examiner  
Art Unit 1612

